

Amendments to the Claims:

Please AMEND the claims as follows:

1. (Previously Presented) A method for filtering messages communicated between a cable head end and one or more cable modems, the method comprising:
 obtaining a message at the cable head end, wherein the message is received
 from one of the cable modems or is to be transmitted to one of the cable modems;
 determining whether the message meets filtering criteria; and
 when the message meets the filtering criteria, copying the message
 including a payload and sending the copied message including the payload to a
 memory device such that the copied message including the payload is stored at the
 memory device;
 wherein the obtaining, determining, copying and sending steps are
 performed by the cable head end.
2. (Previously Presented) A method as recited in claim 1, further comprising:
 when the message is to be transmitted to a cable modem, forwarding the message to the
cable modem; and
 when the message is received from a cable modem, processing the message at the cable
head end.
3. (Previously Presented) A method as recited in claim 1, wherein the filtering
criteria specifies a message type and the message meets the filtering criteria when the message
has the specified message type.
4. (original) A method as recited in claim 3, wherein the message type is a MAP
message.

5. (Previously Presented) A method as recited in claim 4, wherein the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the message is a MAP message that contains any specified service identifier.

6. (Previously Presented) A method as recited in claim 4, wherein the filtering criteria further specifies one or more MAC addresses and the filtering criteria is met when the message is a MAP message that contains any specified MAC address.

7. (original) A method as recited in claim 4, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

8. (original) A method as recited in claim 4, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

9. (original) A method as recited in claim 3, wherein the message type is a dynamic service message.

10. (Previously Presented) A method as recited in claim 9, wherein the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the message is a dynamic service message that contains any specified service identifier.

11. (Previously Presented) A method as recited in claim 9, wherein the filtering criteria further specifies a dynamic service message type and the filtering criteria is met when the message is a dynamic service message that contains the specified dynamic service message type.

12. (original) A method as recited in claim 11, wherein the dynamic service message type is selected from a group consisting of a message for adding, a message for deleting, and a message for changing one or more services.

13. (original) A method as recited in claim 9, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

14. (original) A method as recited in claim 9, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

15. (Previously Presented) A method as recited in claim 1, wherein the filtering criteria specifies one or more service identifiers and the filtering criteria is met when the message contains any specified service identifier.

16. (Previously Presented) A method as recited in claim 1, wherein the filtering criteria specifies one or more MAC addresses and the filtering criteria is met when the message contains any specified MAC address.

17. (Previously Presented) A method as recited in claim 1, wherein the filtering criteria specifies one or more access control type parameters and the filtering criteria is met when the message contains any specified access control type parameter.

18. (Previously Presented) A method as recited in claim 1, wherein the filtering criteria specifies either a downstream or downstream direction and the filtering criteria is met when the message is associated with the specified direction.

19. (Previously Presented) A method as recited in claim 1, wherein the filtering criteria specifies one or more ports and the filtering criteria is met when the message is associated with any specified port.

20. (original) A method as recited in claim 1, wherein the memory device forms part of a computer system that is accessible via a computer network.

21. (Previously Presented) A computer system operable to filter messages communicated between a cable head end and one or more cable modems, the computer system comprising:

one or more processors;

one or more memory, wherein at least one of the processors or the memory are adapted to:

obtain a message at the cable head end, wherein the message is received from one of the cable modems or is to be transmitted to one of the cable modems;

determine whether the message meets filtering criteria; and

when the message meets the filtering criteria, copy the message including a payload and send the copied message including the payload to a memory device such that the copied message including the payload is stored at the memory device;

wherein the obtain, determine, copy and send steps are performed by the cable head end.

22. (Cancelled)

23. (Previously Presented) A computer system as recited in claim 21, wherein at least one of the processors or the memory are further adapted to:

when the message is to be transmitted to a cable modem, forward the message to the cable modem; and

when the message is from a cable modem, process the message at the cable head end.

24. (Previously Presented) A computer system as recited in claim 21, wherein the filtering criteria specifies a message type and the message meets the filtering criteria when the message has the specified message type.

25. (original) A computer system as recited in claim 24, wherein the message type is a MAP message.

26. (Previously Presented) A computer system as recited in claim 25, wherein the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the message is a MAP message that contains any specified service identifier.

27. (Previously Presented) A computer system as recited in claim 25, wherein the filtering criteria further specifies one or more MAC addresses and the filtering criteria is met when the message is a MAP message that contains any specified MAC address.

28. (original) A computer system as recited in claim 25, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

29. (original) A computer system as recited in claim 25, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

30. (original) A computer system as recited in claim 24, wherein the message type is a dynamic service message.

31. (Previously Presented) A computer system as recited in claim 30, wherein the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the message is a dynamic service message that contains any specified service identifier.

32. (Previously Presented) A computer system as recited in claim 30, wherein the filtering criteria further specifies a dynamic service message type and the filtering criteria is met when the message is a dynamic service message that contains the specified dynamic service message type.

33. (original) A computer system as recited in claim 32, wherein the dynamic service message type is selected from a group consisting of a message for adding, a message for deleting, and a message for changing one or more services.

34. (original) A computer system as recited in claim 30, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

35. (original) A computer system as recited in claim 30, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

36. (Previously Presented) A computer system as recited in claim 21, wherein the filtering criteria specifies one or more service identifiers and the filtering criteria is met when the message contains any specified service identifier.

37. (Previously Presented) A computer system as recited in claim 21, wherein the filtering criteria specifies one or more MAC addresses and the filtering criteria is met when the message contains any specified MAC address.

38. (Previously Presented) A computer system as recited in claim 21, wherein the filtering criteria specifies one or more access control type parameters and the filtering criteria is met when the message contains any specified access control type parameter.

39. (Previously Presented) A computer system as recited in claim 21, wherein the filtering criteria specifies either a downstream or downstream direction and the filtering criteria is met when the message is associated with the specified direction.

40. (Previously Presented) A computer system as recited in claim 21, wherein the filtering criteria specifies one or more ports and the filtering criteria is met when the message is associated with any specified port.

41. (original) A computer system as recited in claim 21, wherein the memory device forms part of a second computer system that is separate from the first computer system and that is accessible via a computer network.

42. (Currently Amended) A computer ~~program product~~ readable storage medium storing thereon computer-readable instructions for filtering messages communicated between a cable head end and one or more cable modems, ~~computer program product comprising:~~
at least one computer readable medium;
~~computer program instructions stored within the at least one computer readable medium~~
that, when executed, configured to cause a computer system to:

obtain a message at the cable head end, wherein the message is received
from one of the cable modems or is to be transmitted to one of the cable modems;
determine whether the message meets filtering criteria; and
when the message meets the filtering criteria, copy the-message including a
payload and send the copied message including the payload to a memory device
such that the copied message including the payload is stored at the memory
device, wherein the obtain, determine, copy and send steps are performed by the
cable head end.

43. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 42, wherein the filtering criteria specifies a message type and the message meets the filtering criteria when the message has the specified message type.

44. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 43, wherein the message type is a MAP message.

45. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 44, wherein the filtering criteria further includes an option to append a time stamp to the copied message.

46. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 44, wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message.

47. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 43, wherein the message type is a dynamic service message.

48. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 42, wherein the filtering criteria specifies one or more service identifiers and the filtering criteria is met when the message contains any specified service identifier.

49. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 42, wherein the filtering criteria specifies one or more MAC addresses and the filtering criteria is met when the message contains any specified MAC address.

50. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 42, wherein the filtering criteria specifies one or more access control type parameters and the filtering criteria is met when the message contains any specified access control type parameter.

51. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 42, wherein the filtering criteria specifies either a downstream or downstream direction and the filtering criteria is met when the message is associated with the specified direction.

52. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 42, wherein the filtering criteria specifies one or more ports and the filtering criteria is met when the message is associated with any specified port.

53. (Currently Amended) A ~~computer program product~~ computer-readable storage medium as recited in claim 42, wherein the memory device forms part of a computer system that is accessible via a computer network.

54. (Previously Presented) An apparatus for filtering messages communicated between a cable head end and one or more cable modems, the apparatus comprising:

means for obtaining a message at the cable head end, wherein the message is received from one of the cable modems or is to be transmitted to one of the cable modems;

means for determining whether the message meets filtering criteria; and

means for copying the message including a payload and sending the copied message including the payload to a memory device when the received message meets the filtering criteria such that the copied message including the payload is stored at the memory device, wherein the obtaining, determining, copying and sending steps are performed by the cable head end.

55. (Previously Presented) The method as recited in claim 1, further comprising:

selecting the message filtering criteria.

56. (Previously Presented) The method as recited in claim 55, wherein the selecting step is performed at the cable head end.

57. (Previously Presented) The computer system as recited in claim 21, wherein the memory device is coupled to the cable head end.

58. (Previously Presented) The computer system as recited in claim 21, wherein the memory device is separate from the computer system.

59. (Previously Presented) The computer system as recited in claim 21, wherein the memory device is accessible via a computer network.

60. (Previously Presented) The computer system as recited in claim 21, wherein the memory device is coupled to a monitoring station.

61. (Previously Presented) The method as recited in claim 1, wherein the obtaining, determining, copying and sending steps are performed by the cable head end for messages that are received from one of the cable modems.

62. (Previously Presented) The method as recited in claim 1, wherein the obtaining, determining, copying and sending steps are performed by the cable head end for messages that are transmitted to one of the cable modems.

63. (Previously Presented) The method as recited in claim 1, wherein the obtaining, determining, copying and sending steps are performed by the cable head end for messages that are received from one of the cable modems and for messages that are transmitted to one of the cable modems.

64. (Previously Presented) The method as recited in claim 1, wherein the filtering criteria are not applied by one of the cable modems.

65. (Previously Presented) The method as recited in claim 1, wherein the message is generated by the cable head end.

66. (Previously Presented) The method as recited in claim 1, wherein the message is not generated by one of the cable modems.

67. (Previously Presented) The method as recited in claim 1, wherein the filtering criteria identifies whether the message is associated with a downstream channel.

68. (Previously Presented) The method as recited in claim 1, wherein the filtering criteria identifies whether the message is associated with an upstream channel.

69. (Previously Presented) The method as recited in claim 1, wherein when the message does not meet the filtering criteria, the copying and sending steps are not performed.

70. (Previously Presented) The method as recited in claim 1, further comprising:
receiving one or more filtering commands at the cable head end, the one or more filtering commands specifying the filtering criteria.

71. (Previously Presented) The method as recited in claim 70, wherein the one or more filtering commands indicate one or more parameters associated with the filtering criteria.

72. (Previously Presented) The method as recited in claim 1, wherein the filtering criteria are used to select messages to be copied and stored at the memory device.